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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/914,171	12/21/2001	Yau Wei Lucas Hui	851663.430USPC	1982

7590 04/19/2005

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EXAMINER

HANEY, MATTHEW J

ART UNIT	PAPER NUMBER
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2613

DATE MAILED: 04/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/914,171	Applicant(s) HUI ET AL.	
	Examiner Matthew Haney	Art Unit 2613	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 December 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,9,10 and 15-36 is/are pending in the application.
- 4a) Of the above claim(s) 3-8 and 11-14 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,9,10 and 15-36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This action is in response to the amendment filed by the applicant.

Response to Amendment

Applicant's arguments with respect to claims 1-36 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-2, 9-10, 17, 29-30, and 33 are rejected under 35 U.S.C. 102(b) as being anticipated by Martin (US 5,452,011).

As for claims 1-2 and 9-10, Martin teaches of comparing first and second fields and said first field being a successive field of said second field (Column 2, Lines 24-36); comparing pixel values of said first field and a third field, said third field being a successive field of said first field (Column 2, Lines 11-23); determining whether said first field is an interlaced field or a progressive field (i.e. non-interlaced) with respect to third field based on said steps of calculating (Note: The Example that is explained in Columns 3 and 4 is of the specific example of j and $j + 1$ which is result of reference numbers 18 and 23 being input into the decision circuit, the same steps are taken for the input of reference numbers 17 and 20, which result in the difference of j and $j + 2$);

step of accumulating in an accumulator means absolute difference between the pixel values of said first and third fields (Column 2, Lines 11-23).

As for claims 17 and 33, most of the limitations of the claim are contained in the above rejection of claims 9 and 32. Martin also teaches of calculating a ratio and comparing it to a threshold to determine if the field is interlaced or progressive (Note: The ratio is calculated with the pixel difference and the ratio is then compared to a threshold (W) and then another value is incremented to determine if it is interlaced or not, Column 3, Lines 8-68).

As for claims 29-30, most of the limitations of the claims are contained in the above rejection of claim 1. Martin teaches of the groupings as described in claims 29 and 30 (Column 4, Lines 5-66).

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 15-16, 18-28, 31-32, 34-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Martin (US 5,452,011) in view of Roeder (US 4,661,853).

As for claims 15, 23, and 34, most of the limitations have been discussed in the above rejection of claims 9-10. Martin does not specifically teach of a second subtractor that receives a first pixel of first field and a second pixel of a second field and

calculates the difference; comparator selects the smaller of the pixel differences and accumulates them, however, Roeder does (See Figures 1A-D and Column 4, Lines 20-68 and Column 5, Lines 1-8, Also note that the invention can be used for interframe or interfiled, Column 2, Lines 46-56). It would have been obvious to one of ordinary skill in the art at the time of the invention to compare the first pixel of the first field with the rest of the pixels of a second field in order to more accurately find the pixels with the most motion, which would allow for more accurate compression and display.

As for claims 16 and 24, most of the limitations of the claim have been discussed in the above rejection of claim 15. Martin does not specifically teach of setting to zero pixel differences that are less than a threshold, however, it is considered obvious to one of ordinary skill in the art at the time of the invention that noise must be accounted for and therefore zeroing the difference where noise is detected so that false values are not used in the compression system. (Official Notice, also a general teaching can be found in Roeder (US 4,661,853), Column 1, Lines 52-58)

As for claims 18-20, 25, 28, 31-32, and 36, most of the limitations of the claim have been discussed in the above rejection of claims 1 and 9. Martin teaches of the first and second memory (Figure 1). Martin does not specifically teach of a moving pixel counter, however, Roeder does (Note: Figure 4 combined with Figure 8 will be the equivalent of the moving pixel counter described in claim 18, Column 6, Lines 53-68 and Column 7, Lines 1-51, specifically Column 7, Lines 26-28). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine

Roeder's motion detector within Martin's interlaced field detector in order to have the most accurate results since Roeder's motion detector will detect all motion occurrences.

As for claims 21, 22, 26, 27, and 35, most of the limitations of the claims are contained in the above rejection of claims 1 and 15. Martin teaches of step of determining whether or not there has been a scene change between said first and third fields, at least in part based on said output of said accumulator means (Note: where an isolated field is included which is basically out of sequence (i.e. scene change is drastically different than previous frame) Column 4, Lines 41-57).

Conclusion

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew Haney whose telephone number is (571) 272-7330. The examiner can normally be reached on M-Th (5:30-3:00), Every Other Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Kelley can be reached on 571-272-7331. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Matthew Haney
Examiner
Art Unit 2613

mjh



CHRIS KELLEY

SENIOR PATENT EXAMINER

Art Unit 2613